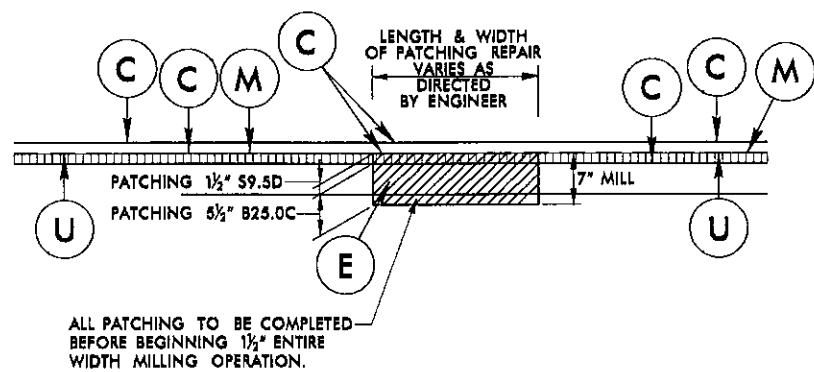
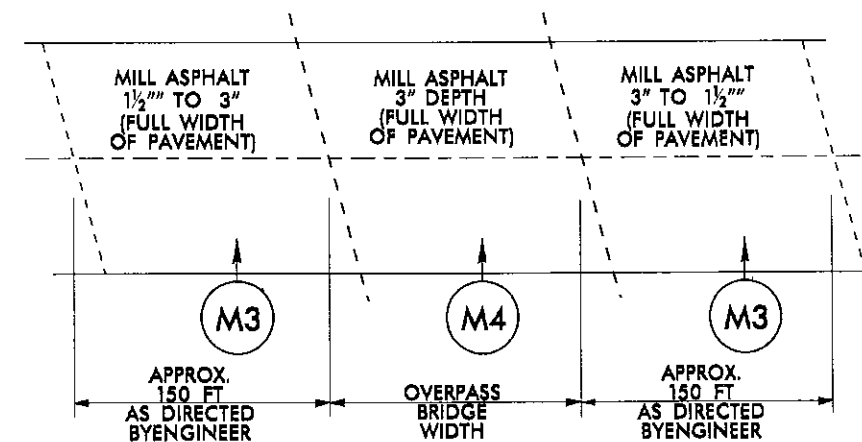
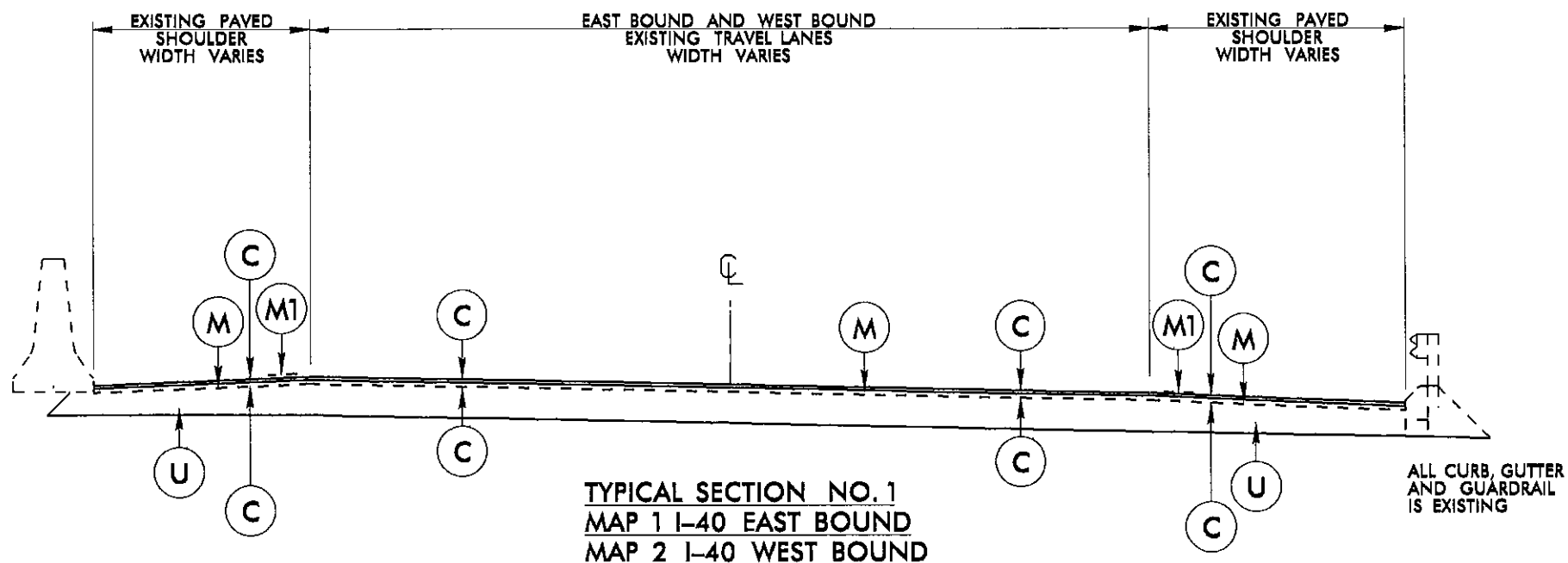


Map 1
I-40 West Bound
Map 2
I-40 East Bound

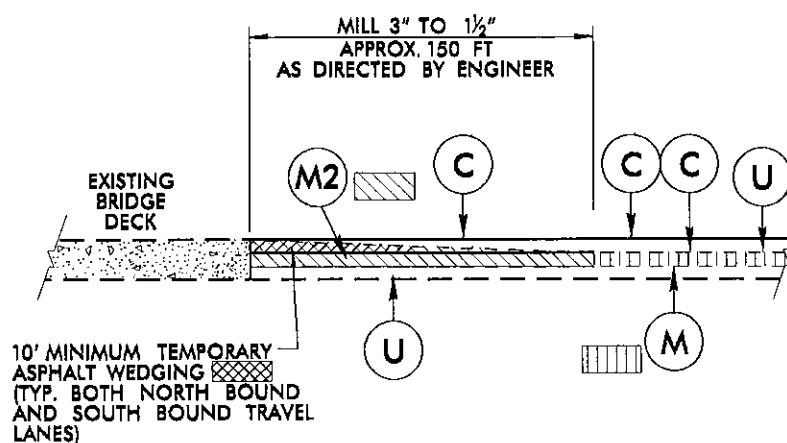
ALL WORK ON THESE MAPS TO BE
NIGHT TIME ONLY 7 P.M. TO 6 A.M., Monday-Sunday.

1. MILL TO PATCH 7" DEPTH AS DIRECTED BY ENGINEER AND PAVE BACK WITH 5½" B25.0C AND 1½" S9.5D.
ALL PATCHING OPERATIONS ARE TO BE COMPLETE IN ONE NIGHT TO MAINTAIN ALL LANES OF TRAFFIC SO THAT THERE IS NO DROP OFF.
2. WHEN PATCHING IS COMPLETE BEGIN 1½" MILLING OPERATION. EACH 1½" THAT IS MILLED HAS TO BE FILLED BY END OF EACH DAY. PAVE BACK WITH 2 LIFTS OF 1½" S9.5D.
3. TIE IN MILL 0-3" AT CONCRETE BRIDGE DECKS A 200 FOOT DISTANCE FROM BRIDGE.

FORSYTH COUNTY
NORTH CAROLINA



PATCHING DETAIL



BRIDGE APPROACH MILLING DETAIL

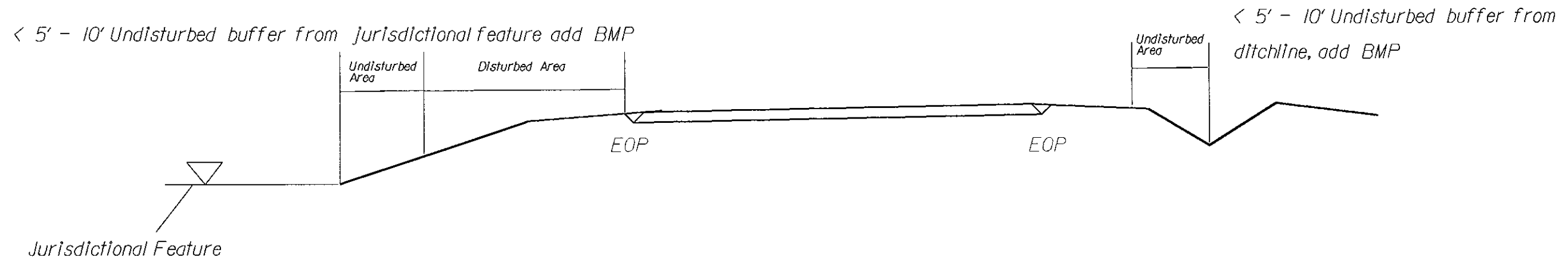
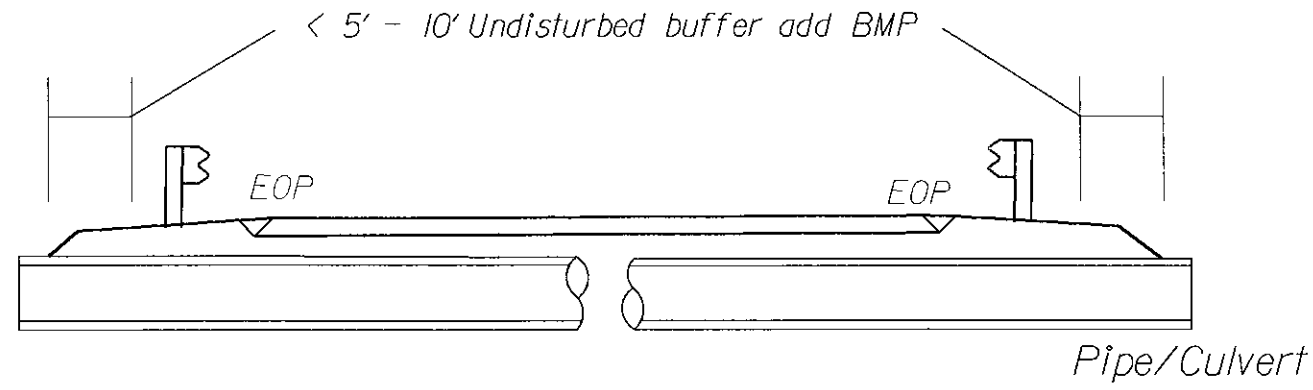
PAVEMENT SCHEDULE	
C	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
M	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH
M1	MILLED RUMBLE STRIP
M2	MILLING ASPHALT PAVEMENT, 3" TO 1 1/2"
U	EXISTING PAVEMENT

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

EROSION CONTROL DETAIL

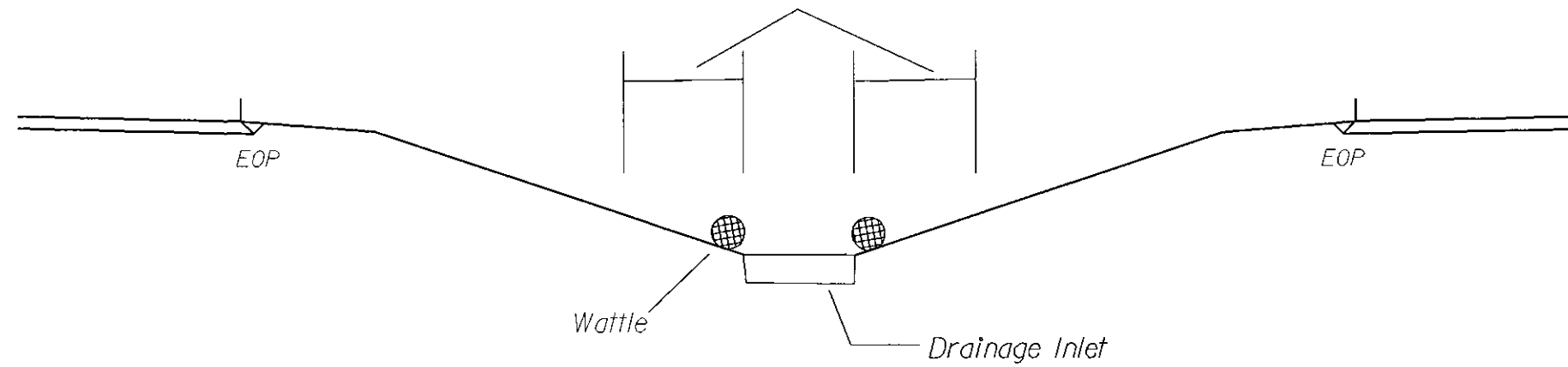
PROJECT REFERENCE NO.	SHEET NO.
2017CPT.09.30.10341.1	3



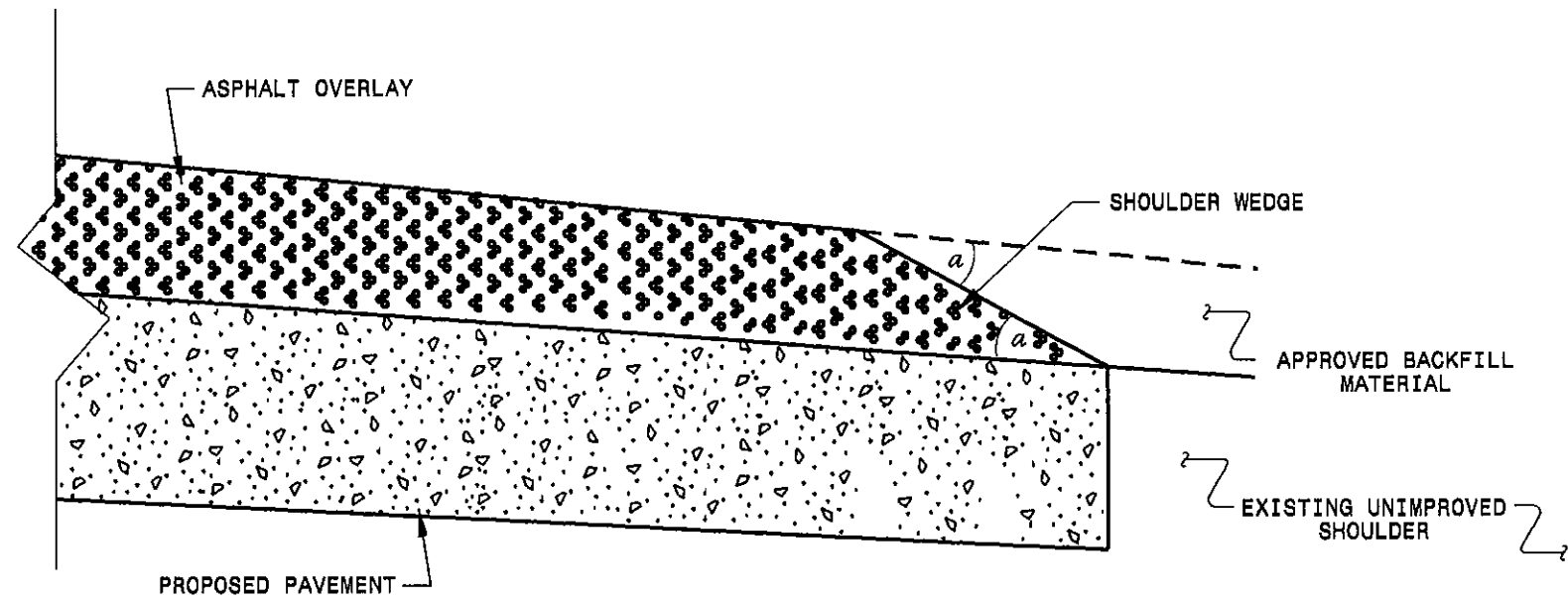
Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



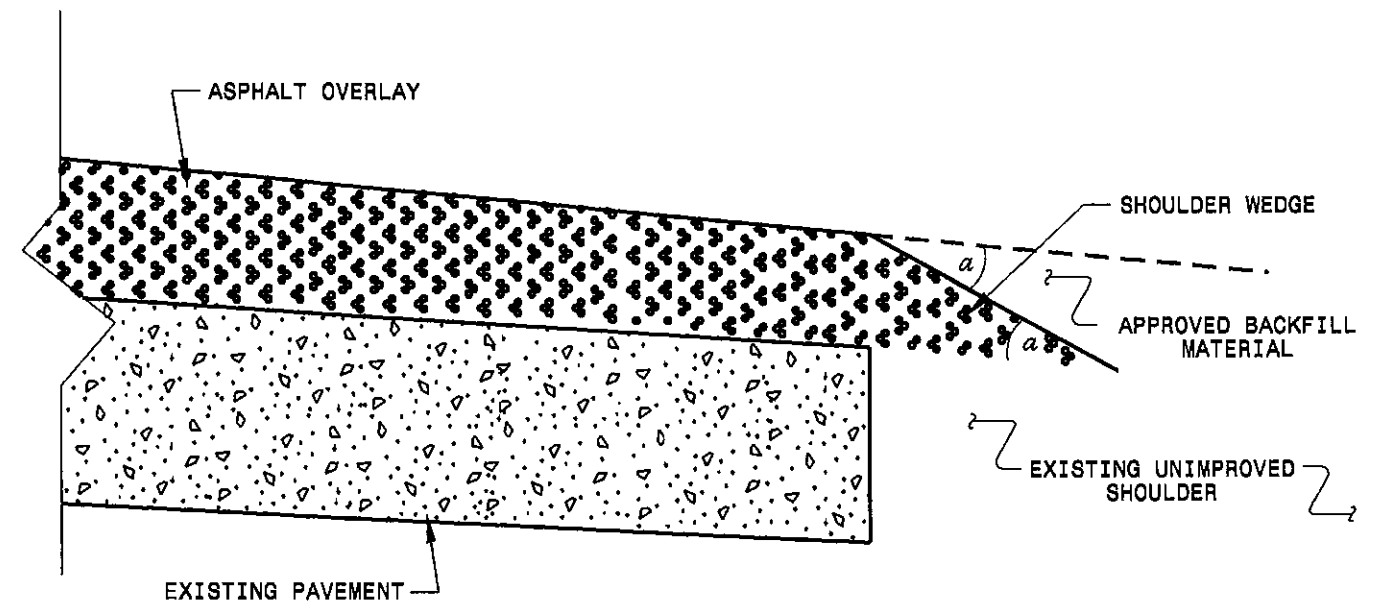
< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE



SHOULDER WEDGE DETAIL



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)

CONTRACT STANDARDS AND DEVELOPMENT UNIT			
Office 919-707-6950		FAX 919-250-4119	
ORIGINAL BY:	T.SPELL	DATE:	7-18-11
MODIFIED BY:		DATE:	
CHECKED BY:		DATE:	
FILE SPEC.:	s:\user\details\stand\shoulderwedgestdetail.dgn		

2017_Resurfacing_FORSYTH

										PROJECT NO.	SHEET NO.
										2017CPT.09.30.10341.1	5
Map No.	Route No.	Route Name	Bridge No.	Feature Intersected	Floor Construction	Clear Roadway Width (Ft)	Horizontal Clearance Under (Ft.)	Vertical Clearance Under	Length (Ft)	Posting	Recommended Treatment, From Bridge Maintenance
1	I-40 & US311	I-40 & US311	340	CLEMMONSVILLE RD.	8 1/2 RC SLAB	105	NA	NA	176	NA	Do not Mill Do Not Pave on Bridge
1	I-40 EBL	I-40 EBL	341	WILLARD RD.	7.5 RC SLAB	52	NA	NA	176	NA	Do not Mill Do Not Pave on Bridge
2	I-40 WBL	I-40 WBL	11	WILLARD RD.	7 1/2 RC SLAB	60	NA	NA	178	NA	Do not Mill Do Not Pave on Bridge
2	NC109	THOMASVILLE RD.	29	I-40 & US311	8 1/2 RC SLAB	68	NA	NA	330	NA	Do not Mill Do Not Pave on Bridge

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.09.30.10341.1	6	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0106000000-E	1220000000-E	1245000000-E	1297000000-E			1308000000-E	1524200000-E	1577000000-E	1704000000-E	1840000000-E	2815000000-N	4600000000-N			5250000000-N	6000000000-E	6071010000-E			
												BORROW EXCAVATION	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH	MILLING ASPHALT PAVEMENT, 3" DEPTH	MILLING ASPHALT PAVEMENT, 1 1/2" TO 3" DEPTH	SURFACE COURSE, \$9.50	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE)	ADJ. OF DROP INLET	SEQUENTIAL FLASHING LIGHTS	WORK ZONE PRESENCE LIGHTING	DIGITAL SPEED LIMIT SIGNS	PORTABLE LIGHTING	TEMPORARY SILT FENCE	WATTLE				
												MI	FT	CY	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	LF	EA	EA	EA	EA	LS	LF	LF		
2017CPT.09.30.10341.1	Forsyth	1	I-40 EB	FROM BRIDGE #340 OVER CLEMMONSVILLE RD. TO CONCRETE PAVEMENT JT. EAST OF EXIT#196 TO US311		3	MD	NO	NO	1.75	38	74	25	0.62	60,309	2,000	6,978	11,030	629	1,103	18,480	7	42	15	5	1	246	25				
TOTAL FOR MAP NO. 1												1.75		74	25	0.62	60,309	2,000	6,978	11,030	629	1,103	18,480	7	42	15	5	1	246	25		
2017CPT.09.30.10341.1	Forsyth	2	I-40 WB	FROM CONCRETE PAVEMENT JT. WEST OF EXIT#196 TO US311 TO BRIDGE #340 OVER CLEMMONSVILLE RD.		3	MD	NO	NO	1.73	38	92	25	0.77	58,441	1,178	6,067	10,731	612	1,111	18,269	2						307	31			
TOTAL FOR MAP NO. 2												1.73		92	25	0.77	58,441	1,178	6,067	10,731	612	1,111	18,269	2							307	31
TOTAL FOR PROJ NO. 2017CPT.09.30.10341.1												3.48		166	50	1.38	118,750	3,178	13,045	21,761	1,241	2,214	36,749	9	42	15	5	1	553	56		
GRAND TOTAL												3.48		166	50	1.38	118,750	3,178	13,045	21,761	1,241	2,214	36,749	9	42	15	5	1	553	56		

NOTE: All Quantities listed include turn lanes and are estimates; Payment will be based on actual field measurements and quantities received.

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.09.30.10341.1	7	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4400000000-E	4405000000-E	4410000000-E	4415000000-N	4420000000-N	4422000000-N	4430000000-N	4445000000-E	4480000000-N	4510000000-N	4721000000-E	4725000000-E			4815000000-E		4825000000-E	4845000000-N		4847100000-E	4847120000-E	4905000000-N
										WORK ZONE SIGNS (STATIONARY)	WORK ZONE SIGNS (PORTABLE)	WORK ZONE SIGNS (BARRICADE MOUNTED)	FLASHING ARROW BOARD	PORTABLE CHANGEABLE MESSAGE SIGN	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	DRUMS	BARRICADES (TYPE III)	TMA	LAW ENFORCEMENT	THERMO MSG ONLY 120 M	THERMO RT ARROW 90 M	THERMO MERGE ARROW 90 M	6" WHITE PAINT	6" YELLOW PAINT	12" WHITE PAINT	PAINT RT ARROW	PAINT MERGE ARROW	POLYUREA PAVEMENT MARKING LINES (6", HIGHLY REFLECTIVE ELEMENTS)	POLYUREA PAVEMENT MARKING LINES (12", HIGHLY REFLECTIVE ELEMENTS)	SNOW PLOWABLE MARKERS	
								MI	FT	SF	SF	SF	EA	EA	DAY	EA	LF	EA	HR	EA	EA	EA	LF	LF	LF	EA	EA	LF	LF	EA	
2017CPT.09.30.10341.1	Forsyth	1	I-40 EB	FROM BRIDGE #340 OVER CLEMMONSVILLE RD. TO CONCRETE PAVEMENT JT. EAST OF EXIT#196 TO US311		3	MD	1.75	38	135	112	13	2	2	4	163	32	1	200	8	3	3	13,744	9,032	1,140	3	3	22,776	1,140	382	
TOTAL FOR MAP NO. 1								1.75		135	112	13	2	2	4	163	32	1	200	8	3	3	13,744	9,032	1,140	3	3	22,776	1,140	382	
2017CPT.09.30.10341.1	Forsyth	2	I-40 WB	FROM CONCRETE PAVEMENT JT. WEST OF EXIT#196 TO US311 TO BRIDGE #340 OVER CLEMMONSVILLE RD.		3	MD	1.73	38	135	112	13	1	1	4	162	32	1	200			3	13,755	9,135	1,079		3	22,890	1,079	403	
TOTAL FOR MAP NO. 2								1.73		135	112	13	1	1	4	162	32	1	200			3	13,755	9,135	1,079		3	22,890	1,079	403	
TOTAL FOR PROJ NO. 2017CPT.09.30.10341.1								3.48		270	224	26	3	3	8	325	64	2	400	8	3	6	27,499	18,167	2,219	3	6	45,666	2,219	785	
GRAND TOTAL								3.48		270	224	26	3	3	8	325	64	2	400	8	3	6	27,499	18,167	2,219	3	6	45,666	2,219	785	

NOTE: All Quantities listed include turn lanes and are estimates; Payment will be based on actual field measurements and quantities received.

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER

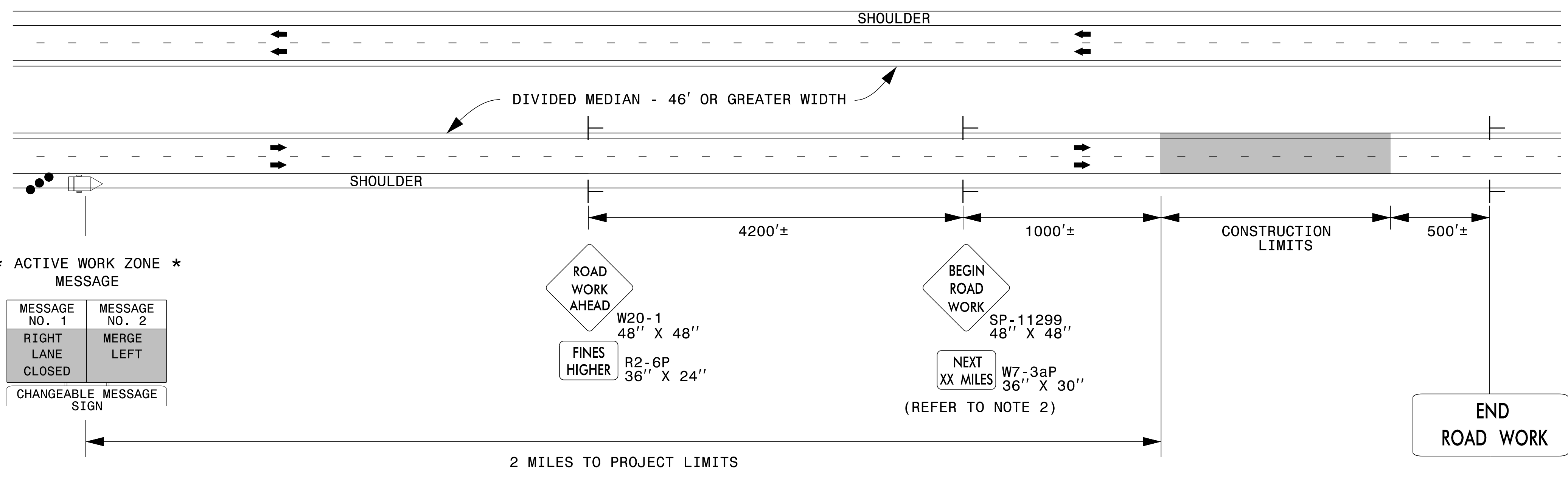
* NOTE: ADVANCE THIS CMS CONTINUOUSLY AS WORK OPERATIONS PROGRESS.

* INACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

* ACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
RIGHT LANE CLOSED	MERGE LEFT
CHANGEABLE MESSAGE SIGN	



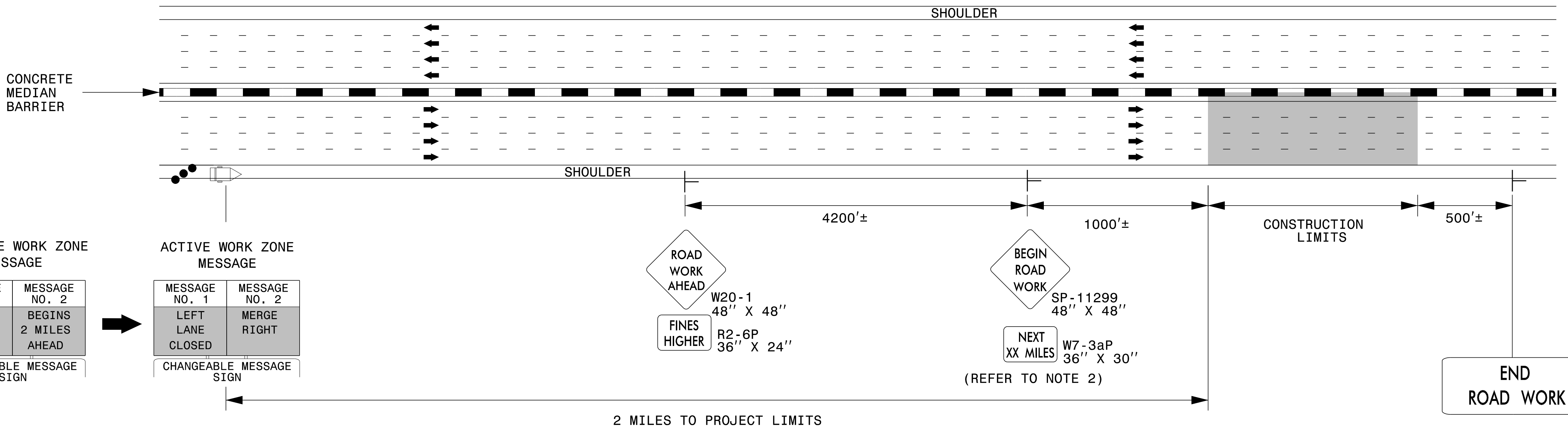
DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

INACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	BEGINS 2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

ACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
LEFT LANE CLOSED	MERGE RIGHT
CHANGEABLE MESSAGE SIGN	



NOTES

1. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE WORK ZONE VARIABLE SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS DETAIL.
2. FOR SIGN W7-3aP, ROUND TO THE NEAREST MILE.
3. FOR ENTRANCE AND EXIT RAMP, REFER TO RSD 1101.01, SHEET 1, DETAIL B & C.
4. FOR ADDITIONAL NOTES, REFER TO RSD 1101.01, SHEET 1.

LEGEND

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

APPROVED: *Steve Kite*
DATE: 2/23/2017

DocuSigned by:
E27CE30E10FC442...

SEAL
022104
JOHN S. KITE, II
ENGINEER

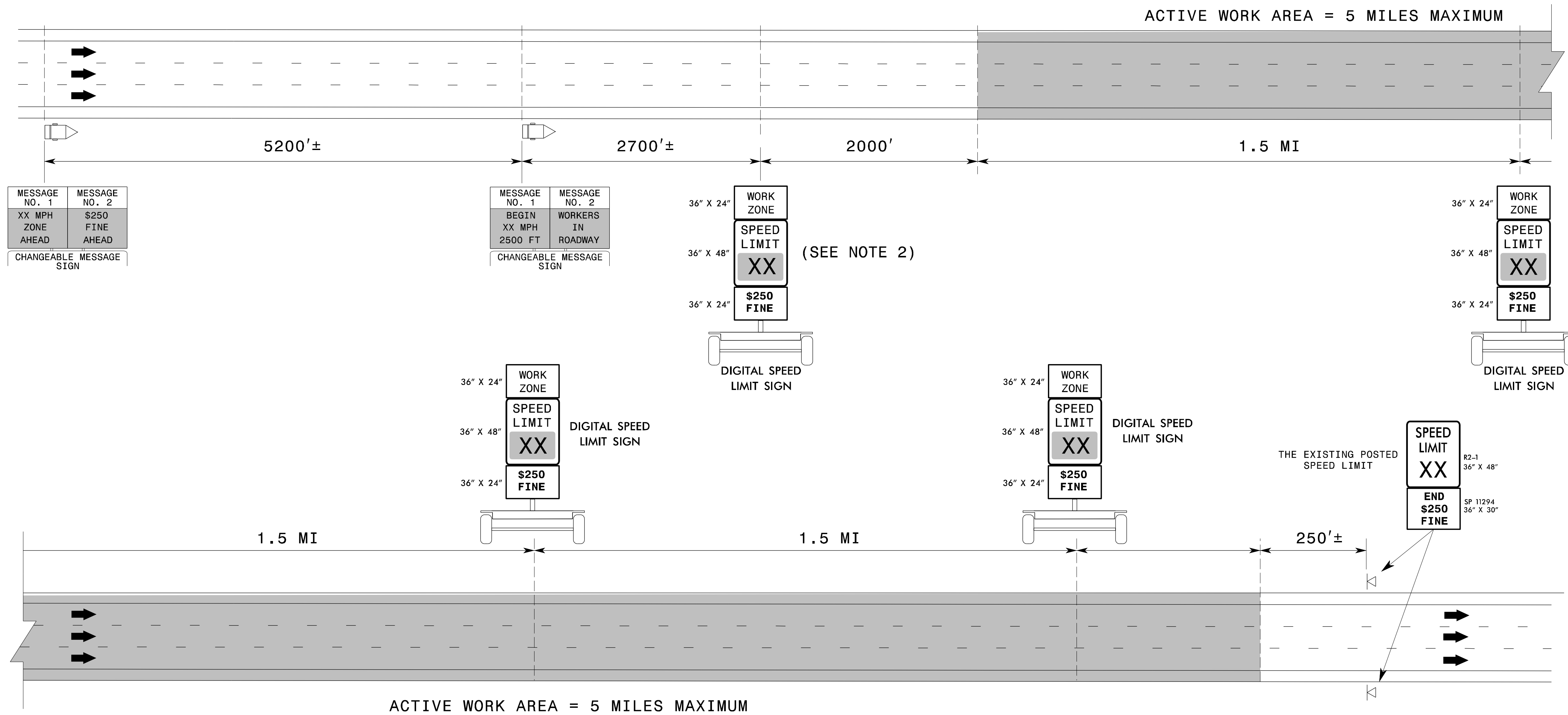
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UNLESS ALL SIGNATURES COMPLETED**



STATIONARY ADVANCE
WARNING SIGNS FOR
INTERSTATE/FREEWAY
RESURFACING PROJECTS

2/23/2017 S:\TMD\WZTC\DesignGroup3\Squad3B\0ats\Interstate Resurfacing Provisions and Details\Kpg\Resurfacing_AdvWarn_HSpd.dgn User:kedais

INTERSTATE RESURFACING OPERATIONS WITH DIGITAL SPEED LIMIT SIGNS



WHEN THERE IS NOT ACTIVE WORK IN THE TRAVEL LANE

SPEED LIMIT DISPLAY	CONDITIONS	
	DROP-OFFS BETWEEN OPEN TRAVEL LANES	PAVED SHOULDER DROP-OFFS
USE EXISTING SPEED LIMIT	< 1.0"	≤ 3.0"
REDUCE SPEED LIMIT 5 MPH	1.0" - 2.0"	> 3.0"

DROP-OFFS BETWEEN OPEN TRAVEL LANES SHOULD NOT EXCEED 2.0"

NOTES

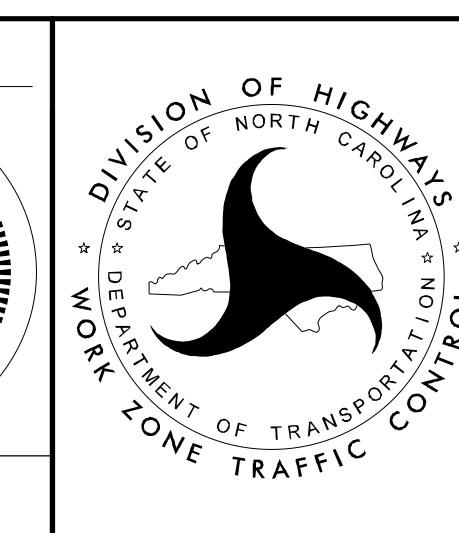
1. THE SPEED LIMITS DISPLAYED WITHIN THE ACTIVE WORK AREA MAY VARY BETWEEN 55 MPH AND 70 MPH, DEPENDENT UPON ROAD WORK CONDITIONS AND THE EXISTING SPEED LIMIT. 55 MPH IS ONLY DISPLAYED DURING ACTIVE LANE CLOSURE OPERATIONS.
2. AT THE FIRST DIGITAL SPEED LIMIT LOCATION, PLACE A DIGITAL SPEED LIMIT SIGN ON BOTH THE INSIDE AND OUTSIDE SHOULDERS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER WHEN THERE IS NOT ENOUGH ROOM ON THE INSIDE SHOULDER DUE TO NARROW MEDIAN AND PERMANENT MEDIAN BARRIER. AT SUBSEQUENT LOCATIONS DOWNSTREAM, PLACE A SINGLE DIGITAL SPEED LIMIT SIGN ON THE OUTSIDE SHOULDER.
3. THE ENGINEER MAY DETERMINE TO INSTALL THE DIGITAL SPEED LIMIT SIGNS ON THE OUTSIDE SHOULDER OR ON THE MEDIAN SIDE IF THE SIGNS ARE NOT HIGHLY VISIBLE TO ALL MOTORISTS.
4. THIS APPLICATION IS FOR SHORT-TERM ACTIVITIES. THE MAXIMUM ACTIVE WORK AREA IS 5 MILES.
5. THE DIGITAL SPEED LIMIT SIGNS TAKE PRECEDENCE OVER EXISTING SPEED LIMIT SIGNS. ALL EXISTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
6. THE DIGITAL SPEED LIMITS SIGNS WILL BE INSTALLED (TRAILER MOUNTED OR STATIONARY MOUNTED) IN ADVANCE AND SPACED APPROXIMATELY 1.5 MILES THROUGHOUT THE ACTIVE WORK AREA, UNLESS DIRECTED OTHERWISE.
7. NCDOT HAS SOLE AUTHORITY OF THE SPEED LIMITS DISPLAYED ON THE DIGITAL SPEED LIMIT SIGNS.
8. THE WORK ZONE VARIABLE SPEED LIMIT AND THE \$250 SPEEDING PENALTY ARE SEPARATE ORDINANCES THAT MUST BE SIGNED BY THE STATE TRAFFIC ENGINEER TO BE VALID AND ENFORCEABLE. WITHOUT A SIGNED ORDINANCE, THE SPEED LIMIT ON A FACILITY SHALL REMAIN UNCHANGED.

APPROVED: *Steve Kite*

DATE: 5/23/2017

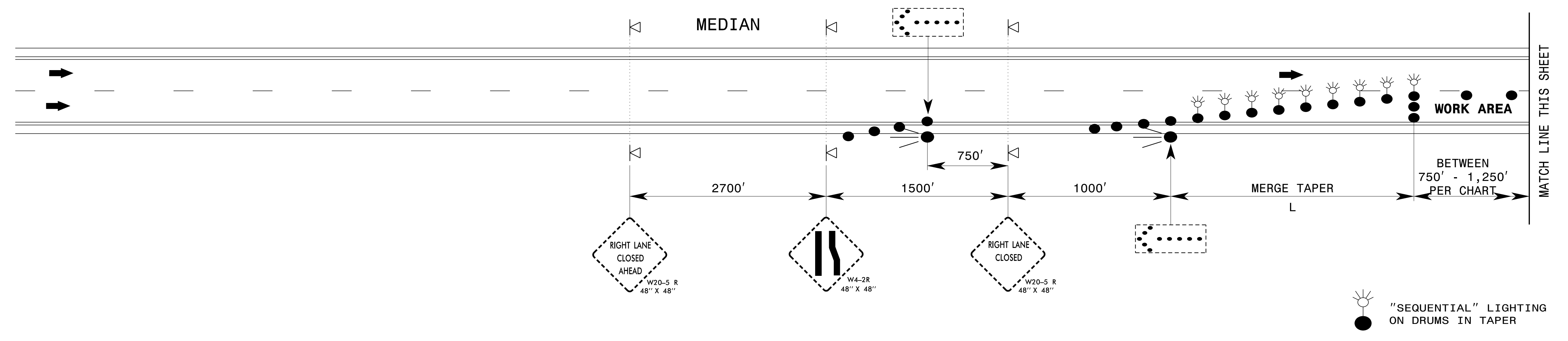
SEAL

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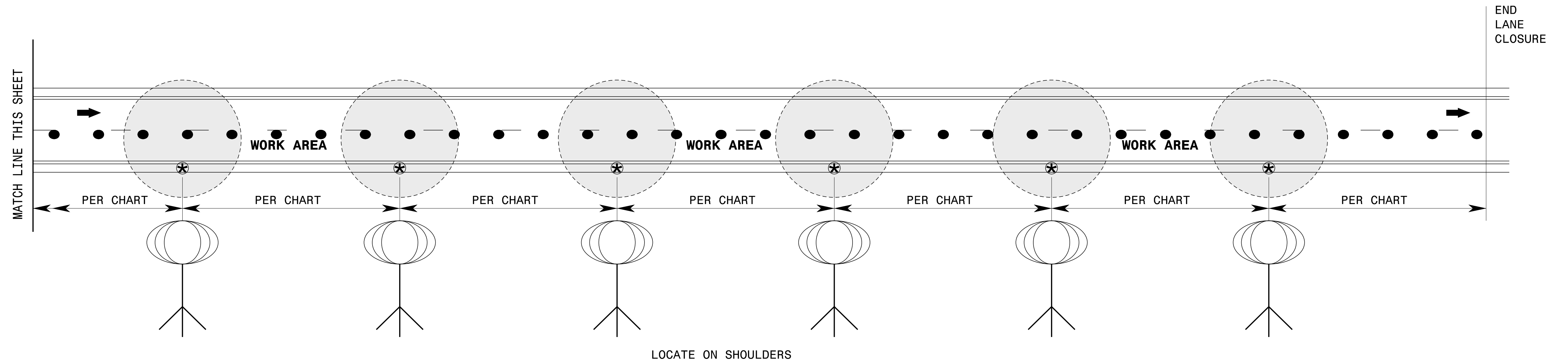


WORK ZONE "VARIABLE" SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREWAY RESURFACING PROJECTS

ADVANCE WARNING AREA



WORK ZONE AREA



SPACING CHART

LIGHT OUTPUT (LUMENS)	MINIMUM LIGHTED FIXTURE AREA (SQUARE FEET)	MAXIMUM SPACING (FEET)	LIGHT UNITS (PER MILE)
50,000 TO 65,000	5.5	750'	6
66,000 TO 80,000	5.5	1,000'	5
81,000 TO 100,000	36	1,250'	4

NOTES

- 1) SPACE LIGHT UNITS ACCORDING TO THE CHART.
- 2) EACH LIGHT UNIT SHALL BE CAPABLE OF ELEVATING TO A MINIMUM HEIGHT OF 14' ABOVE THE PAVEMENT.
- 3) PLACE ON PAVED SHOULDER IF POSSIBLE.

APPROVED: *Steve Kite*
DATE: 3/17/2017

DocuSigned by:
E27CE30E1DFC442...

SEAL
022104
ENGINEER
JOHN S. KITE, II

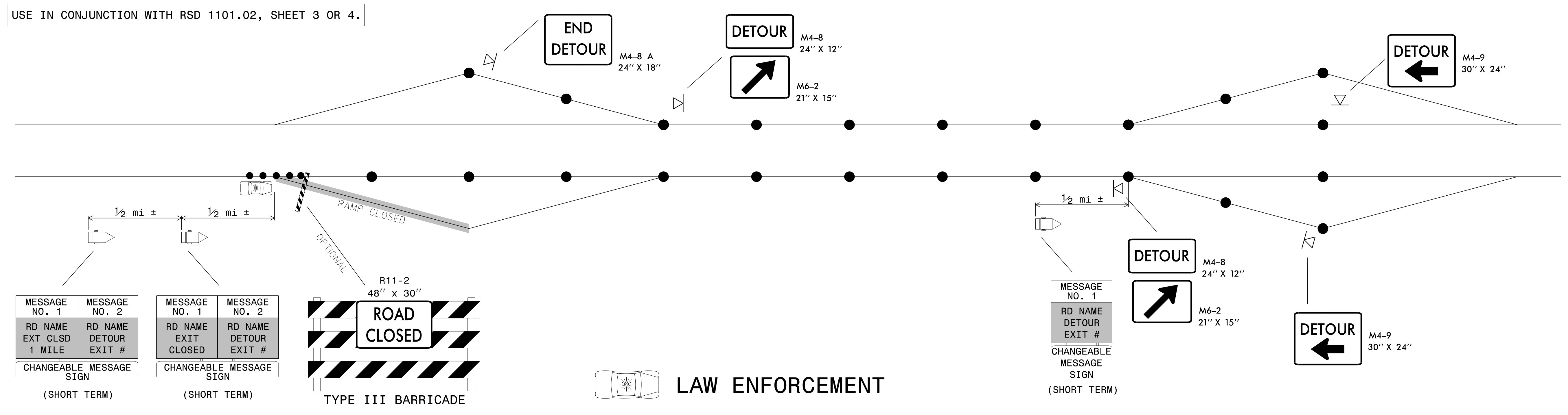
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

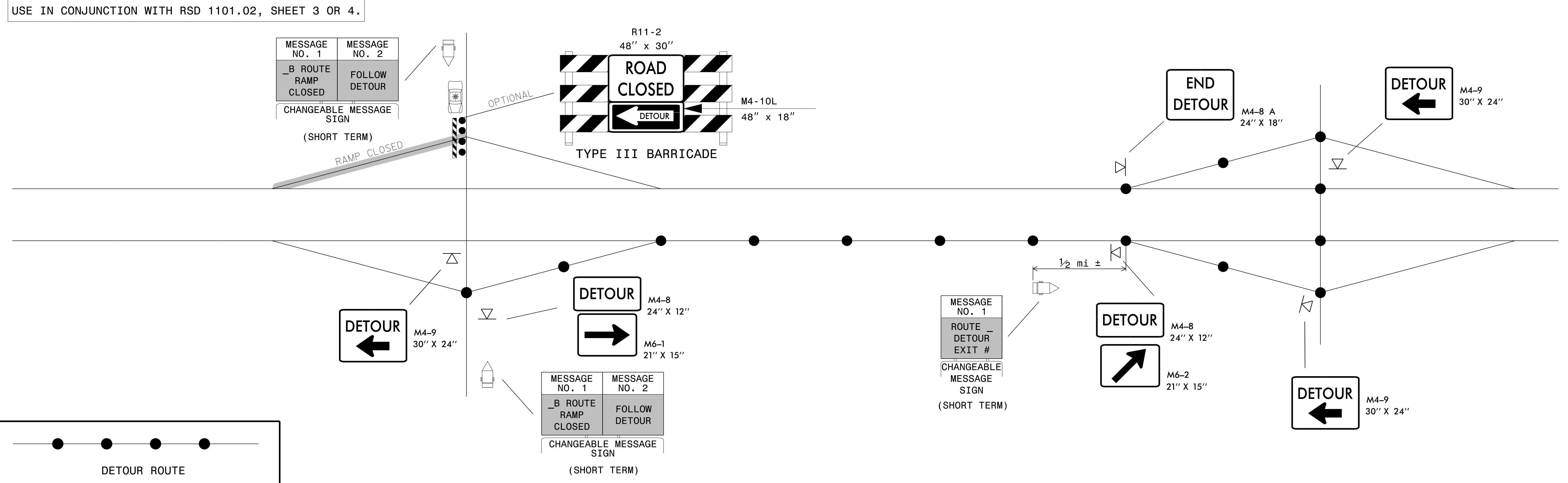
SEQUENTIAL FLASHING
WARNING LIGHTS
AND
WORK ZONE
PRESENCE LIGHTING

3/17/2017 S:\TMU\WZTC\DesignGroup3\Squad3B\Datas\Inter-state Resurfacing Provisions and Details\Detail Drawings\Sequential\and_Presence Lighting_20170227.dgn User:kedais

SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE



SHORT TERM CLOSURE AND DETOUR OF ON-RAMP TO ADJACENT INTERCHANGE



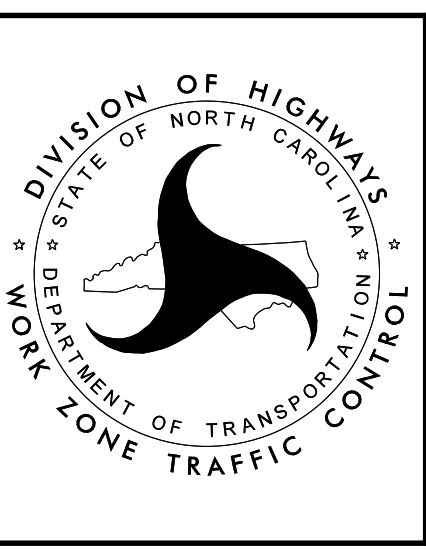
GENERAL NOTES:

1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".
4. ADDITIONAL CHANGEABLE MESSAGE SIGNS AND POSSIBLE DETOUR SIGNS MAY BE NECESSARY FOR MORE COMPLEX CLOSURES/DETOURS. COMPENSATION FOR ADDITIONAL DEVICES SHALL BE MADE BASED ON THE UNIT BID PRICE FOR THE RESPECTIVE DEVICE.

APPROVED: *Steve Kite*
DATE: 2/23/2017

DocuSigned by:
Steve Kite
E27CE30E10FC442...

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SHORT TERM CLOSURE
AND DETOUR OF
INTERSTATE/FREEWAY
RAMPS

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